Homework #6

- Textbook: 1.7.10, 1.7.18, 1.7.34, 1.7.37, 1.7.39, 1.8.4, 1.8.9, 1.8.28
- Programming:

1. (a) Write a function that takes as input
   - dimension n;
   - $n \times n$ matrix A;

   and calculates the LU factorization of A, stored in a single matrix overwriting A, and outputs the number of flops used. Write out or print out your function and turn it in.

   (b) Run the case with on $n \times n$ matrices with value n on the diagonal and -1 for all other elements, for $n = 25, 50, 100, 200$. Write out or print out your results.